## **CLAIMS**

1. A laser recording thermally sensitive recording medium providing a thermally sensitive recording layer comprising at least a photo absorbing material which absorbs laser ray and covert the laser ray to heat, an electron donating leuco dye and an electron accepting color developing agent as main components on a substrate, wherein said photo absorbing material is a compound represented by general formula (1),

$$X_n$$
 $C = CH - CH = CH - C$ 
 $X_n$ 
 $Z_n$ 
 $Z_n$ 
 $Z_n$ 
 $Z_n$ 

wherein, n indicates an integer from 1 to 4, and structural formula of Xn, Yn and Zn- are indicated in Table 1.

Table 1

	n = 1	n=2	n = 3	n = 4
Χn	$N (C_2H_5)_2$	$N (C_2H_5)_2$	$N (CH_3)_2$	$N (C_2H_5)_2$
Υn	$N (C_2H_5)_2$	$N (C_2H_5)_2$	Н	OCH <sub>3</sub>
Zn-	C <sub>4</sub> H <sub>9</sub> —B——	$H_3C$ $SO_3$	CF <sub>3</sub> SO <sub>3</sub>	CF <sub>3</sub> SO <sub>3</sub>

2. The laser recording thermally sensitive recording medium of claim 1, further comprising a compound represented by general formula (2) as a discoloring agent,

wherein, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are respectively independently indicating alkyl

group, aryl group, allyl group, aralkyl group, alkenyl group, alkinyl group, sillyl group, heterocyclic group, substituted alkyl group, substituted aryl group, substituted allyl group, substituted aralkyl group, substituted alkenyl group, substituted alkinyl group or substituted sillyl group, at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> or R<sub>4</sub> is an alkyl group of carbon number 1·12, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> are respectively independently indicating hydrogen atom, alkyl group, aryl group, allyl group, aralkyl group, alkenyl group, alkinyl group, heterocyclic group, substituted alkyl group, substituted aryl group, substituted allyl group, substituted alkenyl group, or substituted alkinyl group.

3. The laser recording thermally sensitive recording medium of claim 2, wherein the discoloring agent is a compound represented by general formula (3),

$$z_{m}$$
 -  $n-C_{4}H_{9}$   $-\frac{\pm}{N}$   $-n-C_{4}H_{9}$  (3)

wherein, m indicates a integer of 1-3, and structural formulae of Zm<sup>-</sup> are shown in Table 2.

	m=1	m=2	m = 3
Zm <sup>-</sup>	C <sub>4</sub> H <sub>9</sub> B	tBu C <sub>4</sub> H <sub>9</sub> —B—tBu	C <sub>4</sub> H <sub>9</sub> B

- 4. The laser recording thermally sensitive recording medium according to anyone of claims 1 to 3, further comprising an anti fading agent or an ultra violet ray absorbing agent, or ultra violet ray absorbing agent and hindered amine photo stabilizing agent, which is an antioxidant.
- 5. The laser recording thermally sensitive recording medium of claim 4, wherein the anti fading agent is at least one compound selected from the group consisting of heat resistance antioxidant, metal oxide or metal soap.

- 6. The laser recording thermally sensitive recording medium of claim 4, wherein the ultra violet ray absorbing agent is benzotriazol ultra violet ray absorbing agent.
- 7. A method for use of the laser recording thermally sensitive recording medium according to anyone of claims 1 to 6 comprising, carrying out laser recording on the laser recording thermally sensitive recording medium, then irradiate light of level which does not cause color development of a thermally sensitive recording layer so as a photo absorbing material to be deactivated and making impossible the addition of postscript.